The UK turkey and geese production industry: a short study

Final report

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INTRODUCTION

This report has been commissioned by the Livestock Products Division of Defra. The terms of reference requested a report on the UK turkey and geese sectors, that identifies and quantifies the principal components (including structure and operation) and economic profiles of these sectors.

More specifically, comments were required on the profile of the two sectors, their structure and representation, bird values, industry operations, regional breakdowns of the two sectors and bird health management.

This electronic interim report was required by 23 February 2007, with the completed report to be presented not later than 2 March 2007.

In the short timescale available it has not been possible to check a full range of likely sources of information or to follow up all potential leads in the industry. The report has been compiled from information supplied by the industry and their representative bodies.

SUMMARY

- The UK turkey sector has polarised into large all year round production (AYR) and generally, small-scale seasonal production.
- Two companies, Bernard Matthews and Cranberry Foods dominate AYR turkey sector.
- These two companies are highly integrated with their own breeding, rearing and processing operations.
- Around 17 million turkeys are slaughtered in the UK each year – around 10 million of these are produced for the Christmas market.
- UK turkey poult placings have dropped by 58% in the last 10 years as UK producers struggle to compete with cheap imports of turkey meat.
- 184,000 tonnes of turkey meat was produced in the UK in 2006.
- 48,000 tonnes of turkey meat was imported into the UK in 2006.
- The UK turkey industry contributes £365 million (measured at retail level) to the UK economy. This equates to 10.7% of the total contribution that the UK poultry sector makes to the UK economy.
- Just over 1.1 million turkeys are produced by small-scale seasonal turkey producers.
- There are around 600 producers of seasonal turkeys - seasonal production is often a very important source of income to general farmers.
- A number of small-scale producers produce both turkeys and geese.
- The UK goose sector is almost exclusively comprised of seasonal production.
- One large company, Gressingham Foods, dominates the goose sector.
- Around 300,000 geese are produced each year in the UK.
- Approximately 300 producers rear geese for the Christmas market.
- The turkey and goose sectors are well represented by national and local organisations that undertake both political and marketing roles.

1.0 INDUSTRY PROFILE

1.1 A Brief Overview of turkey and goose production.

1.1.1.Turkeys All Year Round (AYR) and Seasonal

A more detailed description of husbandry systems is given in section 3 of this report

The UK turkey industry comprises two main sectors – “all year round” (AYR) and “seasonal” production. Around 90% of the turkeys produced in the UK are grown in “conventional” closed housing, with control of temperature and ventilation rates and mechanised feeding and drinking systems. These houses may hold up to 25,000 birds. This is often referred to as “all year round” turkey production. Much of the production is in the hands of integrated companies breeding and rearing their birds on company owned or contracted farms.

The remainder is produced in semi-intensive “pole-barn” houses and free range or organic systems. These are known as “seasonal” or “traditional farm fresh” turkeys”. These tend to be small, “one man band” enterprises where seasonal production forms an adjunct to other farming activities.

Turkeys are **not** kept in cages.

All year round turkeys are slaughtered off-farm, in large, specialist poultry slaughterhouses and the whole birds or portions are sold through multiple retail outlets, wholesale markets, catering trade, butchers etc.

There is a rapidly reducing number of all year round producers (probably less than 10) ranging from Bernard Matthews and Cranberry Foods, as the largest two producers, to some quite modest sized producers. The UK produces around 17 million turkeys a year, 90% of which are produced by two companies. Cranberry Foods was established in 2003 as an amalgamation of Sun Valley’s turkey division with Moorland Poultry and Brandons Poultry. At the end of 2006, Bernard Matthews incorporated the organic and free range production facilities of Cherryridge Poultry. Bernard Matthews also has production and processing facilities outside of the UK.

The Christmas market is thought to account for around 8 to 9 million frozen turkeys (almost exclusively from the all year round producers) plus around 1 to 2 million fresh turkeys (produced, in the main, by seasonal producers).

All year round turkey production takes place predominantly in the eastern half of the country.

Seasonal production is sold mostly at Christmas (although a little sold at Easter and Thanksgiving), direct to consumer at farm gate, or to local butchers, farmers markets etc. Seasonal production is slaughtered on-farm in fairly rudimentary slaughtering facilities compared to AYR slaughtering facilities.

Seasonal turkey production takes place across the whole of the country, with the South West and East Anglia, again, predominating

1.1.2. Geese

A more detailed description of goose production practices is given in section 3 of this report

All of the UK goose production is currently aimed at supplying the Christmas (and to a much lesser extent) the Easter market for fresh goose.

Gressingham Foods took over the production operation of Kerry Foods in Norfolk earlier this year. They now dominate the UK goose market (with around 100,000 geese) with the majority of their production aimed at the Christmas market, but also produce some for the Easter market too. (Gressingham Foods and Gressingham Farms were formerly known as Green Label Foods and Green Label Farms).

The remainder of production (around 200,000 birds) comes from small producers with flocks of around 200 to 300 geese.

All geese are grown in semi-extensive or extensive production systems.

As this is primarily a seasonal business, there will be periods of the year (January to May) when there are very few geese being reared.

The geese are usually raised to between 22 to 26 weeks of age before slaughter. Slaughter and evisceration is generally undertaken on the premises with facilities similar to those used for seasonal turkey production.

1.2 Source of poults and goslings

Turkey poults

AYR

The two largest AYR turkey producers in the UK produce their own poults from their own breeding farms. However, it is becoming more common for these companies to also buy-in a small percentage of their poult requirements. The reason for this is that when the market is poorer and fewer birds are required to meet customer requirements, they simply cut back on the bought-in poult numbers, rather than destroy eggs from their own breeding stock which is very costly.

Other, smaller, AYR producers are unlikely to produce poults from their own breeding stock, but will either import poults themselves or through a specialist company such as Europoult, and/or purchase them from UK rearers. Imports of turkey poults are usually from France, Belgium, Eire or Holland, and exports are mainly to France, Italy and Eire.

Table 1 Trade in turkey poults

Thousands of poults	Imports	Exports
2003	1,967	2,517
2004	691	2,054
2005	1,687	1,746
2006*	1,334	1,643

* 2006 data is provisional and subject to amendments Source: Defra

Variations can be seen in the numbers of poults imported into the UK in the last three years, which can probably be explained by prevailing turkey market conditions.

There is also a trade in importing (and exporting) turkey hatching eggs.

It has not been possible to quantify the source and destination of imported/exported poults, goslings and hatching eggs. In theory, it is possible to extract this data from the TRACES system paperwork collated by Defra at Page Street. In practice, this is a very laborious and time-consuming operation and is felt, by Defra, to not be cost-effective to do so.

Seasonal

The majority of seasonal poults are supplied by specialist poult suppliers such as FarmGate Hatcheries, Holly Berry Hatcheries, Cyril Bason (Stokesay), Highline Turkeys, Lloyd Penine Poultry and SCF (Turkeys). These companies specialise in supplying small numbers of turkeys to seasonal producers. Breeds supplied are likely to be KellyBronze or British United Turkeys (BUT) white strains.

Goslings

The Legarth strain of goose is the most popular breed of goose for the seasonal market. The main goose breeders are breeders MCH and JM Gulliver from Attleborough, Norfolk and R Sage from Tibbenham, Norfolk.

The leading supplier of goslings for the seasonal production of goose is Norfolk Geese, from Pulham Market, Norfolk. Norfolk Geese do not have any breeding stock of their own. They purchase around 40,000 goslings from MCH and JM Gulliver and around 10,000 from R Sage. Goslings are sold to producers primarily as day olds, but some are sold at 7/8 days old and 16/18 days old.

A smaller supplier of goslings for the seasonal trade is Norman A Lea (Lancashire Geese) Ltd from Ormskirk, Lancashire producing around 20,000 goslings per annum.

Gressingham Foods source goslings from MCH and JM Gulliver, with the remainder being imported directly from Denmark, Germany, Poland and France.

1.3 Welfare Legislation and Welfare Codes of Practice

Turkey welfare is protected by the Welfare of Farmed Animals (England) Regulations 2000. This legislation is to be replaced by the Welfare of Farmed Animals (England) Regulations 2007. A Code of Practice for the Welfare of Turkeys was produced in September 1987 under the Agriculture (Miscellaneous Provisions) Act 1968. A new welfare code will be introduced later in 2007 when the Agriculture (Miscellaneous Provisions Act 1968 is repealed.

The welfare of geese is covered by the Welfare of Farmed Animals (England) Regulations 2000. There is no separate welfare code of practice for the goose sector.

1.4 Employment

It is estimated that the turkey sector as a whole employs between 7,000 and 10,000 people in the UK. Employees of Bernard Matthews represent around half of this total. The majority of workers are employed in their processing operation as opposed to their farming operation. In common with other agricultural sectors, an increasing number of employees from other EU countries, such as Portugal, are working in processing factories.

In a report prepared by ADAS in 2006, it was estimated that there are around 100 full-time turkey catchers operating in England and Wales.

1.5 Numbers of birds grown

1.5.1. Turkeys - AYR

The UK AYR turkey sector has contracted rapidly over the past decade as domestic producers find it increasingly difficult to compete with cheaply produced imports of turkey meat. Turkey meat imported from some other EU countries can be produced more cheaply due to lower wage rates, cheaper feed costs etc. Product imported from non - EU countries also benefits from cheaper labour costs and often does not face the additional costs of complying with the environmental legislation that UK producers face.

In 1997, 40.21 million turkey poults were placed on UK farms. For the year 2006, poult placings had dropped to 17.14 million. See table below.

Table 2 UK turkey poult placings (millions)

1997	40.21
2003	22.99
2004	23.15
2005	19.54
2006	17.14

source: Defra

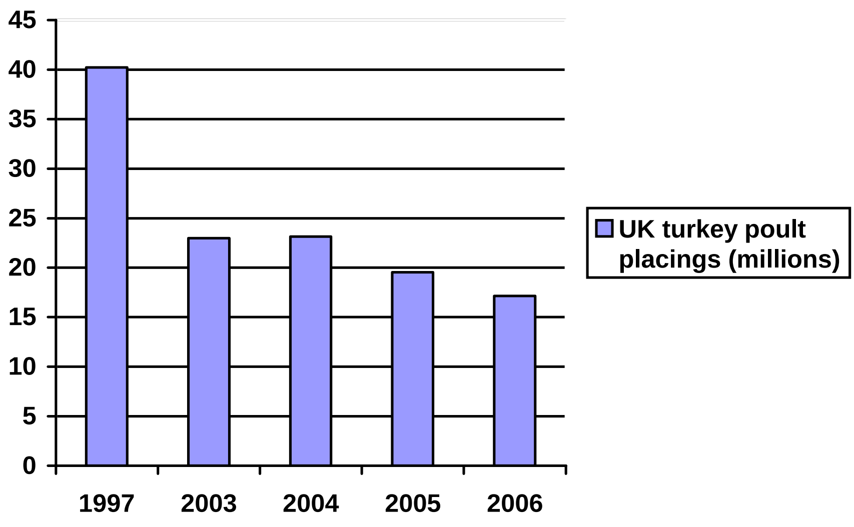

Figure 1 UK Turkey Poult Placings

1.5.2. Numbers Reared – Turkeys – Seasonal

The NFU annual poult survey suggests that the total number of poults reared for the Christmas market by seasonal turkey producers in 2006 was **1.14 million.**

Despite a gradual contraction in the number of producers in this sector, currently around 600, the number of poults placed has remained static over the last three years.

1.6 Geographical split of production

1.6.1. Turkeys

According to information held on the GB Poultry Register (GBPR), there are 2,145 premises with turkeys in England. This equates to around 11.3 million turkeys.

In Scotland there are127 turkey premises, representing 24,000 birds and in Wales there are 151 turkey premises, representing 356,000 birds.

According to the NFU of Scotland, there are no AYR turkey producers in Scotland.

The total for Great Britain is around 11.6 million turkeys in 2,423 flocks. This suggests a GB flock size that is lower than indicated by poult placings and industry estimates. However, the level of turkey keeping registered in the GBPR relates to the "usual number of birds kept on the premises". Consequently, the difference between the different sets of figures can be explained by larger AYR producers growing more than one flock a year. Also, the GBPR covers just Great Britain and not the whole of the United Kingdom.

Based on the distribution of turkeys in the GBPR, England has 96.7% of the total GB flock, Scotland 0.2% and Wales 3.1%.

Of the 2,423 premises that keep turkeys in GB, only 457 of these keep more than 2,000 birds. These premises would belong mainly to AYR turkey producers, though may include a small number of the larger seasonal producers.

There are 814 premises with more than 300 turkeys on them. (If more than 300 turkeys are being reared on a farm, we can assume that these are commercial units rather than "hobby" farmers).

According to information held on the Northern Ireland Bird Register, there are 433 turkey flocks representing a total of 2.2 million birds.

The counties of England with the highest turkey numbers, in descending order of magnitude, are Norfolk, Lincolnshire, North Yorkshire, Shropshire and the East Riding of Yorkshire. Norfolk has 28% of the total number of turkeys in England according to the register.

In Wales, the majority of turkeys are kept in Monmouthshire.

1.6.2. Geese

Using data from the GB Poultry Register, there are 210,000 geese produced on 3,839 holdings in GB.

In England there are 201,000 geese on 3,352 premises, in Scotland there are 4,800 geese on 244 premises and in Wales, 4,500 geese on 243 premises.

According to GBPR data, England has 95.6% of the geese, Scotland 2.3%, and Wales 2.1%.

There are only 92 premises that have more than 200 geese on them, indicating that most geese premises are “hobby” enterprises, rather than commercial operations.

According to the NFU of Scotland there are no large-scale goose producers in Scotland.

According to information held on the NI Bird Register, there are 435 goose flocks, representing a total of 4,880 birds.

In England, Norfolk and Suffolk are the counties with the largest numbers of geese. Combined, they have 58% of the national goose numbers.

In Wales, geese are spread evenly across the country, with no one county predominating.

1.7 Interaction between the turkey and goose sectors

Large-scale AYR turkey producers are generally not involved in any form of goose production. However, some smaller seasonal turkey producers also produce geese for the Christmas market. Gressingham Farms, following their purchase of Kerry Foods, also produce seasonal turkeys and geese. Goose is seen by these producers as an attractive alternative for their discerning, cash rich, customers looking for something different for their Christmas meal.

Some of the allied industries such as feed compounding, private practice vets and agricultural sundries suppliers also supply goods and services to both the turkey and goose sectors.

1.8 Number of birds slaughtered in the UK

1.8.1. Turkeys

In line with the reductions in UK turkey poult placings over the last 10 years, numbers of turkeys slaughtered have continued to decline. In 2006, 17.28 million turkeys were slaughtered in the UK.

Table 3 Turkeys Slaughtered

	Millions slaughtered
2004	21.22
2005	19.36
2006	17.28

Source: Defra

1.8.2. Geese

Numbers of goslings placed, and geese slaughtered, in the UK are not collated by Defra. Industry estimates that total UK geese slaughterings could amount to 300,000 birds per annum.

1.9 Tonnages produced in UK

1.9.1 Turkeys

The tonnage of turkey meat produced in the UK has declined over the last three years by 44 thousand tonnes. This is largely due to the reduction in the number of birds grown.

Table 4 Production (Thousand Tonnes)

	Thousand tonnes carcase weight
2004	227.7
2005	206.0
2006	184.0

Source: Defra

1.9.2 Geese

Defra estimate that 3 thousand tonnes of goose meat was produced in the UK in 2006.

1.10 Value of production (£)

According to figures produced by Taylor Nelson Sofres (TNS), the total UK poultry is worth around £3.4 billion to the UK economy. Of this total, the turkey industry contributes around £365 million at retail level. In percentage terms, this equates to 10.7% of the total retail value of the UK poultry industry. It represents about 0.05% of total household final consumption expenditure and 0.2% of household final consumption expenditure on food and drink.

The value of UK turkey production was around £200 million in 2006 according to figures supplied by Defra. This was 1.4% of UK agricultural output. The value of UK goose production was around £14 million in 2006, which equates to less than 0.1% of total UK agricultural output.

UK turkey production accounts for 0.03% of total GDP.

For the 12 months ended December 2006, the UK retail market for turkey meat can be split as follows:

Table 5 Value of Production

	Value (£'000)
Primary	154,365
Raw convenience	115,626
Further processed	79,649
Ready meals	8,609
Cooked	6,647
TOTAL	364,896

Source: TNS / BPC

1.11 Quantity sold at retail level (kg)

Again using figures supplied by TNS, around 877 million kg. of poultry meat was sold in the UK in the 12 month period to December 2006. Of this, turkey sales represented nearly 95 million kg. (10.8%). The retail split in volumes of turkey meat sold is given below:

Table 6 Quantity sold at retail level

	Volume ('000 kg)
Primary	50,380
Raw convenience	23,434
Further processed	18,411
Ready meals	1,717
Cooked	712
TOTAL	94,654

Source: TNS/BPC

Similar data for the goose sector is not available.

1.12 Value of imports and exports (£)

Defra figures (based on HMRC data) show that the UK **imported** around £1,132 million of poultrymeat in 2006. Of this total, turkey meat represented £111.9 million (9.9%) and goose meat £5.5 million (0.5%).

For goose meat, all of the imports into the UK originate from Europe. For turkeys it is Europe again where the majority of turkey imports come from, although a small but significant amount is imported from South American countries such as Brazil.

Table 7 Value of Imports

IMPORTS Value (£'000)	Goose	Turkey
Europe	5,466	110,734
Asia	0	150
South America	0	1,047
Rest of the world	0	0

Source: Defra 2006 data is provisional and subject to amendments

Total poultrymeat **exports** amounted to £246 million, of which turkey meat accounts for £33.4 million (13.6%) and goose £12,000 (less than 0.1%).

All of the UK exports of goose are to the remainder of Europe, with a small amount going to Asia. With turkey meat exports, Europe receives the majority of the UK's exports, although exports to Asia, South America and the rest of the world do occur.

Table 8 Value of Exports

EXPORTS Value (£'000)	Goose	Turkey
Europe	10	32,445
Asia	3	717
South America	0	33
Rest of the world	0	227

Source: Defra 2006 data is provisional and is subject to amendments

1.13 Volume of imports and exports (kg)

In terms of quantity of imports, in the same period the UK **imported** 583,496 tonnes of poultry meat in total, of which 47,912 tonnes (8.2%) was turkey meat and 1,736 (0.3%) was goose meat.

Table 9 Quantity of Imports

IMPORTS Volume ('000 kg)	Goose	Turkey
Europe	1,736	47,154
Asia	0	69
South America	0	689
Rest of the world	0	0

Source: Defra 2006 data is provisional and subject to amendments

Of the total imports of turkey meat into the UK in 2005, 39.9% was in the form of prepared and preserved turkeys, 29.2% was fresh portions, 15.8% frozen cuts, 9.5% fresh whole birds and the remaining 5.7% were frozen whole birds.

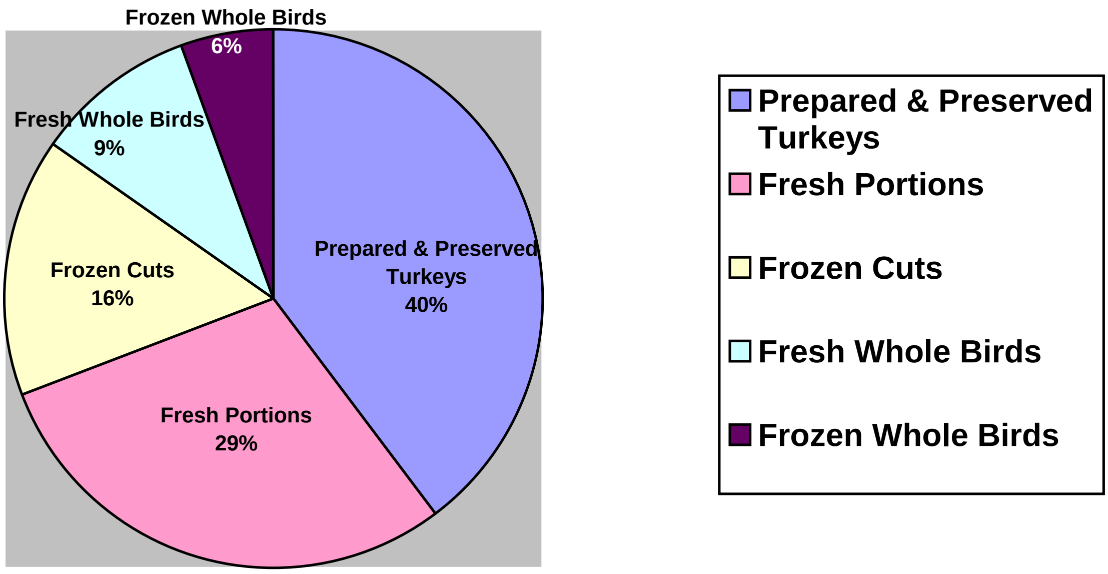

Figure 2 Imports of turkey meat by type

The major importers of turkey meat into the UK were Germany (18.6% of total imports), Hungary (14.8%), Italy (11.7%), the Netherlands (11.1%), France and Irish Republic (9.9% each).

Using the same data, total poultry meat **exports** amounted to 299,247 tonnes. Of this, turkey meat represented 51,764 tonnes (17.3%) and goose meat 4 tonnes (significantly less than 0.1%)

Table 10 Quantity of Exports

EXPORTS Volume ('000 kg)	Goose	Turkey
Europe	3	50,377
Asia	1	681
South America	0	12
Rest of the world	0	694

Source: Defra 2006 data is provisional and subject to amendments

Of the total UK turkey meat exports in 2005, 62.8% of the total was in the form of frozen cuts, 25.3% were fresh cuts, 8.3% prepared or preserved turkey, 1.9% frozen whole birds and 1.7% fresh whole birds.

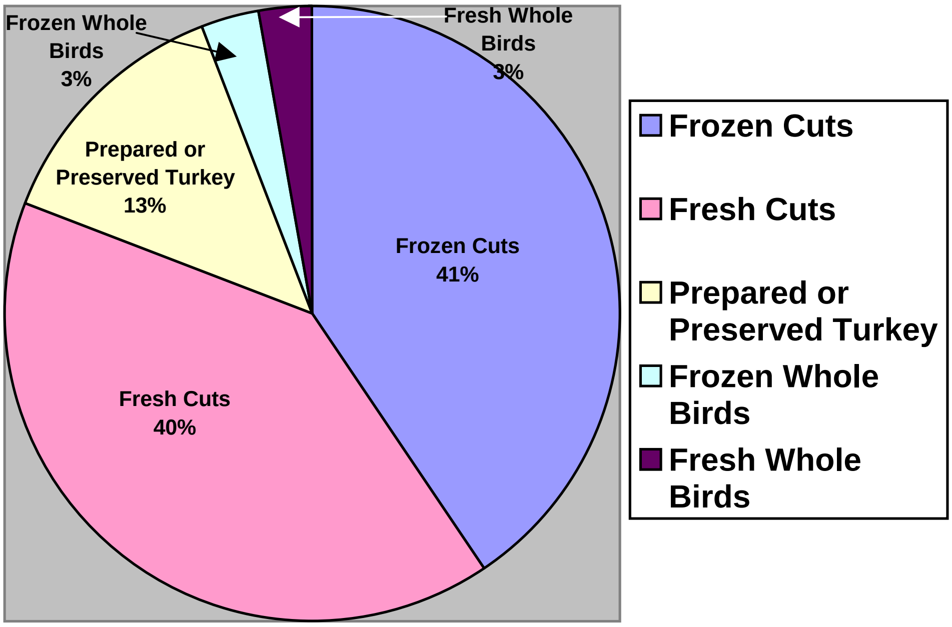

Figure 3 Exports of turkey meat by type

The major importing countries were the Netherlands (20.7%), Germany (19.9%), Russia (14.4%), the Irish Republic (13.7%), and Poland (10.7%).

It is thought that there is only a small amount of turkey meat being imported into the UK which is processed here and subsequently exported. Generally it would not be cost effective to do this. A more likely scenario would be for UK companies to import part-processed meat for further processing in the UK, which would then be sold in the UK. The trade data appears to back this up as prepared and processed turkey products form the bulk of the imports, and frozen cuts of turkey are, by far, the largest category of exports. Any "re-exporting" that does take place is likely to be dark meat from imported whole carcases.

The UK tends to import mainly high-value white meat and export lower-value meat. Whilst import and export quantities in 2006 were broadly similar, the value of imports were more than three times more than the value of exports.

Goose imports 2005

The amount of goose imported into the UK is relatively small. The majority of the imports (over 80%) in 2005 were comprised of fresh goose livers from the Netherlands. The other import of some significance (10%) was frozen goose from Germany.

Goose exports 2005

France and the Irish Republic were the only export destinations for the very small amount of goose exported in 2005.

There is a very small number of adult turkeys and geese imported / exported from the UK.

1.14 Consumption trends

According to figures supplied by a.v.e.c. (the European poultrymeat producers and processors organisation) UK consumption of turkey meat currently stands at 4.0 kg/person per annum. UK consumption has remained fairly static over the last three years as can be seen in the table below.

Table 11 Turkey consumption (per annum)

	Kg / person per annum
2003	4.2
2004	4.3
2005	4.0

Source: avec

In the EU, Germany has the highest per capita turkey meat consumption, currently standing at 6.4 kg. and Spain the lowest at 1.3 kg. By comparison, turkey meat consumption in the USA currently stands at 7.6 kg / person / per annum.

The latest UK Expenditure and Food Survey shows purchases of “whole turkeys and turkey pieces” in the uncooked form. This indicates a consumption of 24 g / person / week. The table below shows how UK turkey consumption, in this form, has reduced over the last four years. It is not possible to say how much is purchased in other forms.

Table 12 Turkey consumption (per week)

	g / person / week
2002/03	30
2003/04	28
2004/05	28
2005/06	24

Source: Defra Expenditure and Food Survey

1.15 Turkey and Goose Production in Other Countries

The UK is the fourth largest producer of turkeys in the EU. France is the largest producer (547 thousand tonnes) followed by Germany and Italy. Of the “new” EU member states, Poland is, by far, the largest producer at 245 thousand tonnes.

Elsewhere in the world, the USA produces 2.46 million tonnes and Brazil 275 thousand tonnes per annum. Whilst the turkey sector in Brazil is much smaller than their broiler sector, it is growing at a rapid rate.

Since 2000, the Brazilian turkey sector has grown by 140% compared to a growth of 58% for the country’s broiler sector. The US Department of Agriculture (USDA) predicts that Brazilian turkey production will increase by a further 10% in 2007, supported by strong domestic demand. 59% of Brazil’s turkey exports are to the EU and this, according to the USDA, is predicted to increase.

2.0 COSTS OF PRODUCTION – INPUT PRICES/OUTPUT VALUES

In this section we have attempted to quantify the main costs of production for AYR turkeys, seasonal turkeys, geese and turkey breeders. The figures given are "average" figures and, as such, should be treated cautiously. In practice, input prices will vary from producer to producer. Economies of scale, location, availability/cost of labour will all have an effect on costs of production. With a very small number of integrated companies operating in the AYR sector, data on costs of production is not always freely available.

2.1 AYR turkey production costs - for a 24 week growing period

The figures given below are based on BUT T8 strains of birds. In most cases, male birds (stags) are kept in separate accommodation to the hens.

Table 13 AYR production costs

Starter feed	£220 / tonne
Grower feed	£195 / tonne
Finisher feed	£187 / tonne
Total feed cost (females)	£6.45 / bird (to 20 weeks)
Total feed cost (males)	£12.13 / bird (to 24 weeks)
Day old poult price	£1.65 / bird
Labour	20.8 p / bird
Litter	36.75 p / bird
Capital cost	£6.00 / bird
Total cost of production (females)	**£9.15 / bird (20 weeks)**
Total cost of production (males)	**£15.01 / bird (24 weeks)**

Source: ADAS

2.2 Seasonal turkey production costs – as-hatched, white strains, reared in pole barns, 24 week growing period.

The figures below are for seasonal turkeys grown in pole barns. In this table white strains of birds have been used, reared as-hatched (i.e. males and females reared together in broadly equal numbers.)

Table 14 Seasonal turkey production costs (White, AH, Pole barns)

Starter feed	£245 / tonne
Grower feed	£229 / tonne
Finisher feed	£228 / tonne
Total feed cost	£ 8.18 / bird
Day old poult price	£2.37 / bird
Labour	£2.08 / bird
Litter	44.1 p / bird
Capital cost	£6.00 / bird
Total cost of production	**£14.22 / bird**

Source: ADAS

2.3 Seasonal turkey production costs – hens only, bronze birds, reared in free range systems, 24 week growing period.

In this table, the cost of hen bronze birds is shown. The hen bronze bird poult cost is higher than as hatched white strains. This, coupled with additional land rental/pasture management requirements for free range production, gives a higher total cost of production than in the previous scenario.

Table 15 Seasonal turkey production costs (Bronze, Hens, FR)

Starter feed	£245 / tonne
Grower feed	£229 / tonne
Finisher feed	£228 / tonne
Total feed cost	£8.18 / bird
Land rental / pasture management	£1.25 / bird
Day old poult price	£4.08 / bird
Labour	£2.08 / bird
Litter	44.10 p / bird
Capital cost	£6.00 / bird
Total cost of production	**£17.17 / bird**

Source: ADAS

2.4 Seasonal Goose production costs – 26 week growing period

The figures below give an indication of the costs involved in producing a 26 week old goose in an extensive system. During the summer months, grazing is supplemented by feeding wheat.

Table 16 Seasonal goose production costs

Starter Feed	£271 / tonne
Grower Feed	£246 / tonne
Finisher Feed	£238 / tonne
Feed Wheat	£100 / tonne
Total feed cost (concentrate)	£11.73 / bird
Total feed cost (feed wheat)	£1.60 / bird
Gosling (inc. transport and levy)	£4.80 / bird
Labour	£1.56 / bird
Litter	52.5 p / bird
Land rental / pasture management	£1.26 / bird
Capital cost	£2.50 / bird
Total cost of production	**£23.31 / bird**

Source: ADAS

Note: In the costs shown above for seasonal production, a day old poult or gosling price has been used.

A small number of producers will chose to purchase their birds at an older age as “growers”.

For seasonal turkey producers, growers can be purchased at around 5 weeks of age. Due to the difficulties associated with moving geese, the latest age for purchasing grower goslings is around 3 weeks of age.

Where growers are purchased, prices will be increased to reflect the additional rearing costs whilst they are on the poult suppliers/hatchery premises.

2.5 AYR turkey breeders – 56 week breeding period

For meat producing birds, their value increases on a linear basis from day old to death. However, for egg producing birds such as AYR turkey breeders, the valuation convention is that values increase in line with costs of production up to the point when the birds generate income from egg sales (“peak value”). From this peak value point onwards, the valuation of the bird is depreciated on a linear basis to the end of lay value. For turkey breeders, peak value occurs at 32 weeks of age.

In practice, costs of production will continue to accrue on a daily basis from day old to death.

Table 17 AYR turkey breeders production costs

Day old poult cost (hens)	£9.50 / bird
Day old poult cost (stags)	£10.54 / bird
Starter Feed	£205 / tonne
Grower Feed	£190 / tonne
Pre Breeder Feed	£190 / tonne
Breeder Feed	£180 / tonne
Male ration Feed	£160 / tonne
Labour	£3.41 / bird
Hen value at peak	£25.92 / bird
Capital cost	£10.00 / bird
Total cost of production (hens)	**£32.43 / bird**

Source: ADAS

2.6 Output prices

2.6.1. Turkeys

An analysis of published prices from a range of seasonal turkey producers across the country shows that oven ready free range bronze turkeys were selling direct from the farmer to the public for around £7.75/kg for a 6kg bird during Christmas 2006.

Pole barn reared white birds sold direct to the public were slightly lower, at £7.25/kg for a 6kg oven ready bird.

Prices of oven ready seasonal turkeys sold wholesale to retail butchers during Christmas 2006 were around £5.82/kg for free range bronze, and £5.72/kg for barn-reared white birds.

Using these figures, an average price for an oven ready white turkey sold at the farm gate last year was £43.50 and for a free range bronze bird it was £46.50

Processing costs for oven ready seasonal turkeys were around £8.40/kg for Christmas 2006.

Current wholesale prices for fresh turkeys on the Smithfield wholesale market (2 March 2007) are £1.95/kg for birds up to 7.25kg, and £1.70/kg for birds weighing more than 9kg.

Smithfield frozen turkey wholesale prices currently (2 March 2007) stand at £1.68/kg for birds up to 7.25kg and £1.40/kg for birds over 9kg in weight.

2.6.2. Geese

An analysis of published prices from a range of seasonal goose producers across the country shows that oven ready geese were selling direct from the farmer to the public for around £8.97/kg for a 6.5kg bird during Christmas 2006.
Using these figures, an average price for an oven ready goose sold at the farm gate last year was £58.31.

Processing costs for oven ready seasonal geese were around £8.40/kg for Christmas 2006.

Prices of oven ready seasonal geese sold wholesale to retail butchers during Christmas 2006 were around £7.12/kg.

Frozen geese are currently available for £3.15/kg from Smithfield wholesale market.

3.0 INDUSTRY OPERATIONS - PRODUCTION

3.1 Turkeys

The UK turkey industry can be divided into the *primary breeding sector* (covering pedigree and grandparent stock) and the *production sector* (covering parent stock, hatcheries, growing and processing).

Turkey primary breeding sector
The majority of stock supplied to the mainstream production sector comes from British United Turkeys (BUT) who are based near Chester, and now owned by the Aviagen group. It has the full generational range of stock in the UK. Although numbers of pedigree stock used for breeding are small, the number of day old pedigree stock produced is relatively large as the percentage of pedigree birds selected for breeding is very small. Generally, one percent of males and ten percent of females are finally selected.

Pedigree stock is kept on high-level biosecure farms. Their progeny go onto the great grandparent (GGP) and grand parent (GP) generations. The GP eggs then produce Day Old parent stock (PS) that passes to the production sector.

BUT 8, BUT 9 and Big 9 breeds are used to produce medium sized turkeys for the whole bird, portioned and further processed markets. BUT Big 6 and T2 are used to produce heavy strains suited to the portioned, further processed and value-added product markets. (BUT also offer smaller strains for the seasonal turkey markets).

Artificial insemination is standard practice in turkey breeding and usually carried out by special teams. Although turkey breeding stags are able to mate naturally, artificial insemination of turkey breeding hens is carried out to prevent injury to the hen by the stag and to ensure that more consistent fertilisation occurs. It is usual for a significantly smaller hen from one strain to be crossed with a large stag from a different strain to achieve optimum production characteristics.

The turkey sector has a small but very significant breeding sector that produces a range of birds for seasonal markets. The main breeder in this market is Kelly Turkeys in Essex who produce the KellyBronze breed, in addition to other breeds such as the Roly Poly, Pumpie and Wrolstad breeds. Farmgate Hatcheries, operated by Kelly Turkeys at Danbury in Essex, are the largest suppliers of turkey poults to the seasonal market, and hatch throughout the year for AYR producers too. Norfolk Black traditional turkeys are bred by Peele's Norfolk Black Turkeys near Norwich.

Turkey Production sector
In the production sector of the UK turkey industry there are approximately 250,000 parent stock on around 40 farms. Parent flocks are either owned by the integrated turkey companies or hatcheries or contracted to them on a

long-term basis. The female and male birds are purchased at day old from a primary breeding company. The majority are placed on specialist rearing farms and then moved to production farms at point of lay. Although more than one flock may be housed on a farm at any one time, in the overwhelming majority of cases each flock is kept as a separate biosecure unit and moved to a production unit in its entirety.

There are seven turkey hatcheries in the UK, owned by six companies (including two that are seasonal). Average hatchability is around 75% and there is a 28-day incubation period.

Hatching eggs would generally be collected on a weekly or twice weekly basis from the parent stock farms.

Day old poults are usually delivered to rearing farms within a day of hatching. Some though could be delivered to brooding farms and once feathered they would be delivered to rearing farms as brooded poults.

3.1.1. All year round turkey production

The largest AYR processors operate an integrated production system, with their own breeding farms producing turkey poults for fattening. In addition to rearing/fattening their own birds, they will also have a small number of producers growing birds on contract for them.

By definition, all year round production takes place throughout the year, with husbandry systems similar to those found in commercial broiler production, but with the growing period being longer - 20 to 24 weeks for the larger stag birds, for example. Most operate on an “all in, all out” system with farms being totally depopulated before the next batch of day old chicks arrives. The majority of turkeys are reared in enclosed buildings with modern systems of environmental control. These systems provide for precise control of heating, ventilation and lighting. Ventilation systems are designed to provide air containing sufficient oxygen for the normal growth and development of the turkeys, and to remove excess ammonia, carbon dioxide, dust, moisture and heat. Stocking density can be adjusted during the latter part of the rearing period by the removal of some birds for early slaughter. This process is known as “thinning”.

Recently, some AYR producers have begun growing relatively small numbers of free range turkeys too.

All year round turkeys are slaughtered off-farm, in large, specialist poultry slaughterhouses and the whole birds or portions are sold through multiple retail outlets, wholesale markets, catering trade, butchers etc.

3.1.2. Seasonal turkey production

The majority of seasonal production will take place in pole barns with only rudimentary environmental control. Consequently, pole barns accommodate a small proportion of the UK turkey population but constitute a relatively large proportion of the production units. Turkey poults intended for housing in pole barns are usually reared in brooder houses until they are six weeks of age, by which time they do not need additional heat. Once in the pole barn, they are subject to natural daylight (which may be supplemented during the winter moths with an electric light) and there is often little control of temperature or ventilation. The labour requirement in pole barns is higher and the stocking density lower than in enclosed housing.

An increasing number of seasonal turkeys are being reared in free range systems. Housing for free range turkeys is usually of a low cost and basic standard, and is often similar to pole barn accommodation but with the turkeys being able to roam over outdoor pastures. Natural daylight and green vegetation are available for the birds on the range. The latest NFU poult survey suggests that 52% of seasonal producers now provide at least some outdoor access for their birds.

Seasonal turkey production is often a very profitable adjunct to other farm enterprises and, on arable farms, employs farm labour and buildings at times of the year when it would otherwise be under-utilised.

As with all year round production, day old poults are brought onto the farm and grown until they are ready for slaughter some 20 – 24 weeks later. Poults are brooded for around 6 weeks. After this period they do not need additional heat. A small number of producers purchase “growers” (which could be 5-6 weeks old) rather than day old poults. By definition, seasonal production takes place in the period from July (when poults are placed on farms) to early December (when the grown turkeys are slaughtered). Stocking densities are lower in pole barns compared with conventional housing.

In seasonal turkey production, finished turkeys are slaughtered on-farm in small, seasonal, slaughtering facilities.

Seasonal production is sold mostly at Christmas (although a little is sold at Easter and Thanksgiving), direct to consumer at farm gate, or to local butchers, farmers markets etc

3.2 Seasonal Goose Production

The seasonal goose production period starts around late May/early June when the buildings that are to be used for goose production are given a final clean down. Brooders are put together, and heated up, 3 days before the goslings arrive onto the farm. Many seasonal producers choose to collect their goslings from the suppliers, thus saving the transport charge.

Once the goslings arrive, they usually spend around 10 to 20 days under the brooder, though this period is largely dependant upon the temperature and weather outside of the buildings. During this period the goslings are fed a mash food starter free from medication. In practice, many producers will use duck feed for feeding geese.

Once the birds move off the brooders, they remain inside buildings for 6 to 8 weeks until they develop their waterproof feathers. Once this has happened they are let out onto open pastures to graze. From about 10 weeks of age, compound feed is reduced and the bird's diet is supplemented with corn or pellets once a day. During this summer grazing period some producers shut the birds in the buildings each night, whilst others let them have access to the pasture for a full 24 hours. The choice is dependant upon the siting of the unit and the extent of the housing facilities available. It is important that the grazing area is fox-proof.

Bedding for the geese is mostly straw, which may need to be topped-up every other day if weather conditions are poor. Birds are wormed once or twice in their lives with an in-feed wormer.

The geese are then brought back into the buildings at 22 to 26 weeks of age for slaughter. During this period the birds are fed, ad lib, finisher ration. Slaughter and evisceration is generally undertaken in specialist buildings on the premises. Birds are dry plucked after slaughter and then dunked in hot wax to remove any down and small feathers left on by the dry plucker. Birds will then be hung for around 10 days to develop flavour, and then eviscerated.

An increasing number of geese are being processed as three bird roasts (for example, a pheasant within a chicken within a goose) and an increasing market for goose fat has been experienced in the last couple of years. Goose feathers are by-product that does attract a small value.

4.0 INDUSTRY OPERATIONS – PROCESSING

4.1 Legislative Requirements

Poultry meat slaughterhouses with a high throughput of birds will be fully licensed under the EU Food Hygiene Regulations.

Small producers supplying direct to the customer or to local retailers selling direct to the final customer are exempt from the legislation. “Small producers” are defined as those producing and slaughtering 10,000 birds on the farm or producing more than 10,000 who are members of an assurance scheme and who either dry pluck by hand or slaughter for 40 days a year or less.

4.2 Processing of Turkeys

Turkey producers generally have their own ‘in-house’ processing facilities, where the live birds are taken for slaughter and evisceration. For the major turkey production companies, processing activities are centred on a very small number of large and highly-automated processing plants. Only ‘home-produced’ turkeys are slaughtered in the UK.

Given the consolidation in the sector in recent years, it follows that there are few such premises in England and Wales. The Food Standards Agency website currently lists approximately 45 slaughterhouses in England and Wales that process turkeys and operate under Article 4.5 of EC Regulation 853/2004. This list includes a number of the larger traditional-type processors that concentrate on the Christmas market, with locations including Essex, Berkshire, Leicestershire and Devon.

Only ten plants are listed as being turkey-specific and these include the large plants owned by major turkey production companies, situated in East Anglia, the Midlands, South Wales and Lincolnshire.

The smaller, seasonal producers typically also have their own on-site premises that process only home-reared birds using traditional methods. 75% of seasonal producers dry pluck their birds, the remaining 25% wet pluck them.

4.3 Further Processing of Turkeys

In some cases, the eviscerated turkey carcass is ‘further-processed’ by cutting-up the whole carcass. This may be followed by the addition of other ingredients to the meat (e.g. bread-crumbs, herbs etc.) and/or by cooking to produce ready meals and cooked meats. Further processing may be carried out in respect of turkey that is imported to the UK, whether in whole carcass or other processed forms.

Further processing of turkey is generally undertaken only by the ‘all year round’ production companies and by the larger seasonal producers. Smaller-scale turkey producers tend to sell all their birds in whole, oven-ready form. .

Where further processing does take place, it is normally confined to cutting-up the carcass to create smaller and more convenient products, such as joints, crowns and mince.

Bernard Matthews are alone amongst turkey producers in having developed a range of fresh and frozen own-brand products.

4.4 Processing of Geese

Goose producers also have their own ‘in-house’ processing facilities in close proximity to the farm. The Food Standards Agency website lists just 10 slaughterhouses that process geese and operate under Article 4.5 of EC Regulation 853/2004. These are predominantly located in the Midlands and East Anglia. All of these premises are also listed as processing other poultry species, most commonly turkeys.

As for turkeys, seasonal goose producers typically also have their own on-site premises that process only home-reared birds using traditional methods.

4.5 Further Processing of Geese

Given the typical carcass weight and the traditional nature of much of the goose sector, it follows that there is very little ‘further processing’ operations, as defined above, with the exception of Gressingham Farms who cut-up some of the goose carcasses.

5.0 BIRD HEALTH MANAGEMENT

5.1 Turkeys

5.1.1. AYR integrated companies

AYR integrated companies may own all of the farms on which birds are housed or have a mix of company farms and private contract growers.

Usually the integrated company dictates the management standards this would include:

- Biosecurity protocols
- Ventilation programs
- Hygiene programs, including chemicals used
- Vaccination programs
- Feed programs
- Pest control programs, although these are usually primarily focused on rodent and arthropod control. Pest control may be undertaken by trained company staff or professional pest control companies.

Controlled environment housing is usually found in tandem with good biosecurity levels.

These integrated companies will often have both turkey breeder and hatchery operations. They will buy turkey breeding stock as day olds from the primary breeding companies. The company will have control of the health status of the breeding stock that supplies hatching eggs to their hatcheries. In some cases some additional hatching eggs will be imported, but generally there is good control over the supply and health status of the poult supply into this sector.

Within integrated companies the feed is usually managed by the company; this will cover supply and feed formulation including the use of any zootechnical feed additives.

The company will usually have a specialised poultry veterinarian involved in the day to day healthcare of the stock or available to advise on health planning and investigation. The private contract growers may be offered the services of this veterinarian as part of the growing contract with the integrated company or may seek the services of another veterinarian independent of the company. This is usually dictated by the growing contract.

The integrated company usually has a management structure in place that oversees the management and health of farms. The communication system within company hierarchy will facilitate information on health being transferred to a level in the company that enables corrective measures to be implemented. A key person in this structure would be the area farms manager, a company employee who will visit and advise a number of farms, both company and contract grower. This person is often a major conduit of information and communication between the farms and the veterinary supervisors. For example, should there be an increase in mortality, the farm manager would ask the advice of the area farm manager who would then decide if the advice of the farm veterinarian should be sought.

Most of this sector are members of assurance scheme Quality British Turkeys (QBT) with the necessary requirement to have formal flock health planning.

5.1.2. Seasonal turkey producers

Seasonal producers may be multi-species farms, usually the seasonal turkey production is only part of the farm income. Buildings are often not purpose built but use is made of existing farm buildings or simple pole barn construction. The production is often extensive and/or free range with the inherent poorer biosecurity of this type of system.

These producers may, or may not, employ the services of a specialized poultry veterinarian. Many are not members of QBT and therefore do not have the requirement for formal health planning

The poult supply is, in the main, more fragmented into this sector. Apart from the specialist breeds, for example, KellyBronze the supply of hatching eggs and therefore chicks into the sector is more fragmented. Both hatching eggs and day old poults maybe imported for supply into this sector for the seasonal producer. Thus the control on health status of the day old poult is more variable.

Feed may be purchased from a variety of feed suppliers.

Pest control programs are usually directed at rodent control. This may be undertaken by the farmer or contracted out to professional rodent control companies.

It is unusual to have the management support structures in place for this type of grower. In fact many will be relying on feed and or poult supplier for technical support and advice.

5.1.3. Disease threats to turkey production.

Avian metapneumovirus infection (TRT)
There is a high prevalence of this disease in the UK turkey population. Many turkeys will be exposed to this virus during their life. It is probably the most common viral disease of turkeys in the UK. The virus predisposes birds to other disease agents especially secondary bacterial disease, for example, E.coli and Ornithobacterium rhinotrachaeli.

Vaccinal status also has a significant bearing on the outcome of exposure to virus. Unfortunately the current TRT vaccines available in the market are not consistently effective. In the AYR integrated turkey business, vaccination for TRT is more common than in the seasonal producers. The impact of TRT infections in seasonal production is generally less than in the integrated sector.

Avian Paramyxovirus type 1 (Newcastle Disease).
There is low prevalence in the UK as turkeys are relatively resilient to infection. Vaccination is available in the UK, however its use in growing turkeys is very variable. Vaccination of turkey breeders for NDV is in the main universal, both live and inactivated vaccines being used. Serological responses to live NDV vaccines in turkeys can be quite poor.

Avian Paramyxovirus type 3
There is a high prevalence of this disease, but it is difficult to diagnose. The infection is specific to turkeys, but clinically only affects breeders. Egg drops are seen in infected turkey breeders. There is an inactivated vaccine available, which requires two doses. Its use in turkey breeders is widespread.

Haemorrhagic Enteritis Virus
This is an Adeno virus that causes immunosuppression and mortality. There is a high prevalence of the infection in the UK turkey flock. The infection due to the immunosuppression can predispose to other infectious agents, for example, TRT and E.coli. The outcome of this infection similar to TRT is highly dependant on management. Live vaccine is available in the EU but it is not licensed in the UK. Currently it can be imported under special licence.

Avian Influenza
Despite the recent H5N1 AI outbreak in turkeys in Suffolk, there is a low prevalence of AI in the UK, but turkeys are highly susceptibility to AI viruses. There is a zoonotic potential with this agent. LPAI maybe difficult to detect due to the low mortality levels and this can, of course, result in silent shedding of virus. Vaccination is controlled by EU legislation

Poult enteritis and mortality syndrome (PEMS)
This, as the name suggests, is a syndrome - the etiology is not fully understood. However, turkey coronaviruses and astroviruses are implicated in the syndrome. It is difficult to assess the prevalence in the UK although it has been reported. Losses can be quite considerable in terms of mortality and poor subsequent performance of the growing birds. No vaccines are available at the current time

Mycoplasma
Prevalence is variable across the sector. Generally M.gallisepticum and M.meleagridis are well controlled in the turkey breeding sectors and also in the integrated companies. The control of M.gallisepticum and M.synovae in the seasonal producers is more variable, this is probably due to the biosecurity levels in this sector. Vaccination is not practiced for mycoplasma control.

Salmonella
Prevalence studies are being undertaken by Defra and will be reported later this year. Salmonella species of human health significance have been reported in turkeys. Control of salmonella in breeding turkeys is good, preventative vaccination is not practiced.

Pasteurella
Sporadic prevalence in turkeys, more common in seasonal turkey production than in the integrated sector. Turkeys are highly susceptibility with high mortality being seen in both acute and chronic infections. No licensed vaccines are available in the UK. Vaccines are either imported or autogenous vaccines produced specific to site.

Erysipelas
Sporadic prevalence in turkeys, as with Pasturella, but is more common in seasonal turkey production than in the integrated sector. Mortality can be high, but it is usually associated with persistent low level mortality. However the losses can be significant since the disease is usually seen in young turkeys, which are relatively more valuable. Where vaccination practiced on susceptible sites, it is to good effect.

Coccidiosis
Prevalence of coccidiosis is variable, but is generally seen more often in the seasonal turkey sector. Its prevalence seems to have increased since the removal of antibiotic growth promoters from turkey diets. Coccidiostats are usually used for control, but their effectiveness is variable. Episodes usually complicated by necrotic enteritis as a secondary infection, which can significantly increase mortality. No vaccines are available for control of coccidiosis in turkeys..

Histamonas
Their prevalence is relatively low, but is more common in seasonal producers. Mortality rates in affected flocks can be very high as there is no treatment licenced in the UK

Import/export
Hatching eggs and some day old poults move within the EU. Currently eggs and poults moved between countries are derived from Poultry Health Scheme flocks. Testing requirements include freedom from M.gallisepticum and M.meleagridis.

The market structure is such that a large amount of de-boned meat moves between the major producing countries, Germany, France, Poland, Hungary and the UK. Meat imports and exports must conform to standard health certification

5.2 Geese

5.2.1. Goose Health management:

Apart from the brooding period, geese are usually reared outside on range rather than housed. They may be fattened under cover but this is usually in open buildings. Since the production is extensive and, more commonly on range, biosecurity is limited.

Pest control is in the main directed at rodents and foxes. The controls applied for rodents are limited as the birds are usually on range and fox control has to be implemented to avoid losses during rear.

Goose producers may, or may not, employ the services of a specialized poultry veterinarian. Currently there are no assurance schemes for goose production and therefore no requirement for formal health planning.

The hatching egg and gosling supply is more fragmented in the goose sector, compared to the turkey sector, and therefore the health control is more variable than in other poultry sectors.

Geese are grazers, however the finishing feed will come from a variety of feed mills.

Generally the only management support available to the goose growers is from the hatcheries supplying goslings.

5.2.2. Disease threats to Goose production.

Disease is relatively uncommon in geese. Goose parvovirus was identified in the UK in 2005 and caused high mortality in young goslings. However breeding flocks are now vaccinated with a vaccine imported from France under special permit. This vaccine has been highly effective in controlling the disease in the UK goose flock.

Avian Paramyxovirus type 1 (Newcastle Disease)
There is low prevalence in the UK and geese are resilient to signs of infection. Vaccination is not implemented.

Avian Influenza
Despite the recent H5N1 AI outbreak in Suffolk, there is low prevalence in the UK and geese are resilient to signs of infection. There is a zoonotic potential with this agent. Vaccination is controlled by EU legislation

Salmonella
Salmonella sporadically identified in geese; the true prevalence is not known.

Pasteurella
Sporadic prevalence in geese, generally no vaccination is undertaken.

Bacterial septicaemia
This is sporadically identified in growing geese, E.coli and Riemerella anatipestifer are not uncommon isolates from these septicaemic cases.

Import/export
Hatching eggs and some day old goslings move within the EU. Usually customers request freedom from salmonella and imports/exports will require health attestation by government veterinarians.

6.0 REPRESENTATION AND ORGANISATION

6.1 Turkeys

The **Turkey Sector Group** of the **British Poultry Council** (BPC) represents turkey farmers and integrated turkey producers and processors, responsible for 90% of British turkey sales. The BPC headquarters are in London.

BPC turkey member companies contribute to a voluntary industry levy that pays for both research and development and publicity and marketing activities.

BPC turkey producers have successfully worked together to introduce British Quality Turkey standards, and introduce British Quality Turkey as a brand. The Technical Advisory Committee oversees the QBT assurance scheme and comprises member companies' technical, farming and production specialists.

QBT producers are independently inspected against 200 individual quality criteria covering all aspects of rearing and production. Particular attention is paid to food safety, traceability and bird welfare.

The Technical Advisory Committee also has members drawn from FAWC, Humane Slaughter Association etc.

The R&D Group focuses on the technical and research aspects of turkey production. The forum is for scientific debate and advises the BPC on issues concerning turkey health and welfare. It works closely with animal research institutes and also sponsors a number of dedicated PhD scholarships.

Publicity and marketing for the Group is undertaken by the British Turkey Information Service, based in Hurstpierpoint, West Sussex.

Smaller, independent, turkey producers often see the NFU as being more able to respond to their needs, which sometimes do not correspond with those of the larger, integrated producers. The NFU Headquarters is now based in Warwickshire.

The NFU Poultry Board has a Turkey sub-group comprised of regional representatives from the turkey production sector.

The NFU has designed a membership package specifically to meet the needs of seasonal turkey producers. The package offers a number of benefits to members such as the detailed results of the NFU annual turkey poult survey and information on seasonal turkey costs of production.

A series of autumn turkey marketing meetings are organised around the country each year at which the latest costs of production are presented.

Only NFU turkey members are entitled to use the new UK turkey logo – a logo designed by seasonal producers to place on turkeys to differentiate the UK product from imported birds.

Additionally, members are entitled to a free listing on the “Ted Turkey” website. This is a consumer information site directing potential consumers to their nearest retailer of Christmas turkeys.

The **Traditional Farmfresh Turkey Association** is based in East Sussex. The TFTA was founded in 1984 to preserve the “original method of turkey production”, where the turkey is grown to full maturity before being dry plucked and hung for at least seven days before evisceration.

A code of practice needs to be complied with before traditional producers are allowed to use the “Golden Promise” seal of approval on their birds. The Golden Promise seal has been given protected status under EU food law.

The TFTA have a website where potential consumers can see the contact details of their local Golden Promise turkey supplier.

There are a small number of local turkey discussion groups. Probably the most well-known of these is the **Anglian Turkey Association**. This association organises a number of meetings for its members, including an annual study tour for members to gain knowledge of how turkeys are produced in other EU countries.

6.2 Geese

The **Goose Sector Group** of the **British Poultry Council** is the leading association for goose producers in the UK, representing all those who are involved in the breeding, hatching and rearing of geese. The group promotes and develops co-operation within the goose industry, particularly the sharing of knowledge between members.

In addition to regular committee meetings, the Group organises an annual “Goose Farm Walk” where members and stakeholders meet to discus the key issues and see the latest production techniques.

The Group has its own website that lists producers of geese in the various regions of the country.

Publicity for the Group is managed by BHR Communications.

The BPC is in the process of redrafting its Goose Code of Practice. This Code covers the animal health and welfare of geese reared for meat, the traditional system in which they are reared, and the expected standards of food hygiene for on-farm processing. The BPC is liasing with the RSPCA on how the Code can be integrated within Freedom Food principles.

Both the BPC and NFU have good political links with government and key opinion formers within Defra and other decision-making bodies. Both the BPC and NFU have bases in London to facilitate this activity.

Turkey and Goose producers in Scotland who are not members of the BPC would look towards **NFU Scotland** for political lobbying and representation.

In Northern Ireland, the **Ulster Farmers Union** has a poultry committee which non-BPC members would use for political representation.

The "**Anglian Turkey Exchange**" is operated at Christmas-time by Len Goodman. In this exchange, producers with surplus turkeys at different weights can be matched up with other producers seeking additional supplies. Last Christmas over 90 producers used the exchange, and 17,000 birds were moved though it. In its 27-year existence, 393,648 turkeys have been moved through it.

7.0 KEY COMPANIES AND INDIVIDUALS IN THE UK TURKEY AND GOOSE SECTORS

7.1 AYR Turkey Production

Bernard Matthews Ltd
Great Witchingham Hall
Norwich
Norfolk
NR9 5QD

Tel: 01603 872611

Managing Director: Martin Newman

Annual Turnover of £400 million and employs 7,000 people world-wide (Germany, Hungary and New Zealand)

8 million turkeys produced p.a. on 57 farms in Norfolk, Suffolk and Lincolnshire.

Cranberry Foods
Hollybank Farm
Scropton
Derby
DE65 5PS

Tel: 01283 816600

Managing Director: Andy Lewins

Annual Turnover of £85 million and employs 900 people

5.5 million turkeys produced p.a. on 70 farms across Northern England, Midlands, Herefordshire and South Wales.

O'Kane Poultry Ltd
170 Larne Road
Ballymena
Co. Antrim
Northern Ireland
BT42 3HA

Tel: 028 256 49018

Agriculture Director: Mike Alcorn

Employs 2000 people across the group (including chicken production/processing)

I million turkeys produced AYR, 300,000 seasonal

Lincs Turkeys Ltd
Ivy Lane
Louth
Lincolnshire
LN11 7JE

Tel: 01472 388727

Managing Director: John Martin

750,000 AYR turkeys produced on 40 farms, mostly in Lincolnshire

Holly Tree Farm
Chester Road
Over Tabley
Knutsford
Cheshire

Tel: 01565 651835

Partner: Michael Bailey – Michael is currently Chairman of the NFU Turkey Group

100,000 AYR turkeys and 1,000 seasonal geese produced.

7.2 Turkey Breeding

British United Turkeys
Warren Hall
Broughton
Chester
Cheshire
CH4 0EW

Tel: 01244 661111

Sales and Marketing Director: Richard Hutchinson

The hatchery and the majority of the pedigree farms are in Cheshire, but they also have other pedigree farms near High Wycombe and a grandparent production base in the Loire Valley of France.

Kelly Turkey Farms
Springate farm
Bicknacre
Danbury
Essex
CM3 4EP

Tel: 01245 223581

Chairman: Derek Kelly
Managing Director: Paul Kelly

Breeders - of the KellyBronze turkey
Hatchery – FarmGate Hatcheries
Poult suppliers
Producers of birds for the seasonal market

Holly Berry Hatcheries
The Hatchery
Station Road
Langworth
Lincolnshire
LN3 5BB

Tel: 01522 754388

Chief Executive: Roger Finney

SCF Turkeys
Heath Hey
Heath Lane
Childer
Thornton
South Wirral
Cheshire
CH66 7NN

Tel: 0151 339 2543

Director: Sally Hawkins

7.3 Turkey Poult Suppliers

Europoult
3 Church Road
Skelmersdale
Lancashire
WN8 8ND

Tel: 01695 724006

Director: Philippe Gerval

Import and export turkey poults and hatching eggs

FarmGate Hatcheries (see Kelly Turkey Farms)

Holly Berry Hatcheries (see above)

SCF Turkeys (see above)

7.4 Seasonal Turkey Production

Gressingham Farms Ltd
Loomswood Farm
Debach
Woodbridge
Suffolk
IP13 6JW

Tel: 01473 735456

Agricultural Director: Stephen Urwin

100,000 turkeys produced for the Christmas market, and 20,000 for Easter.

Kelly Turkey Farms (see above)

Copas Traditional Turkeys Ltd
Kings Coppice Farm
Grubwood Lane
Cookham
Maidenhead
Berkshire
SL6 9UB

Tel: 01628 474678

Managing Director: Tom Copas

40,000 seasonal turkeys p.a. Eight contracted growers rear half of these birds.

Jane Haigh, Marks Hall Turkeys (Chairman of TFTA)
Traditional Farmfresh Turkey Association
PO Box 2089
Seaford
East Sussex
BN25 2WG

Anglian Turkey Exchange
Len Goodman
19 Birkin Close
Tiptree
Essex
CO5 0PB

Tel: 01621 815740

7.5 Goose Production

Gressingham Farms Ltd
Loomswood Farm
Debach
Woodbridge
Suffolk
IP13 6JW

Tel: 01473 735456

Agricultural Director: Stephen Urwin

100,000 geese produced mostly for Christmas market, with some for Easter.

Goodman's Geese
Walsgrove farm
Great Whitley
Worcester
WR6 6JJ

Tel: 01299 896272

Partner: Judy Goodman – Judy is also Chairman of the British Goose Sector Group of the BPC

3,500 geese produced for seasonal market (plus seasonal turkeys too)

7.6 Goose Breeding

MCH and JM Gulliver
Attleborougjh
Norfolk

Tel: 01953 483306

Owner: Martin Gulliver

R Sage
Tibenham
Norfolk

Tel: 01379 677334

Owner: Bob Sage

7.7 Gosling Suppliers

Norfolk Geese
Chestnut farm
Pulham Market
Diss
Norfolk
IP21 4XG

Tel: 01379 676391

Manager: Eddie Heggarty

Lancashire Geese
Tower View Farm
Blindman's Lane
Ormskirk
Lancashire
L39 3AD

Tel: 01695 572023

Director: David Lea

In addition to being gosling suppliers, this company also breeds a small number of geese.

8.0 SOURCES OF INFORMATION ACCESSED FOR THIS REPORT

- a.v.e.c.
- ADAS publications and colleagues
- British Poultry Council – Turkey and Geese Sector Groups
- Daniel Parker - Slate Hall Veterinary Practice, for the section on bird health
- DARDNI
- Defra Animal Health and Welfare website
- Defra Statistical Publications
- Farm Animal Welfare Council (FAWC) Turkey Report
- GB Poultry Register
- Internet websites of breeders, hatcheries, poult suppliers, integrated and independent producers and their representative organisations
- National Farmers' Union (NFU)
- National Farmers' Union Scotland
- Personal communications with production/processing companies
- State Veterinary Service
- Traditional Farmfresh Turkey Association
- Ulster Farmers Union
- United States Department of Agriculture

APPENDIX

Turkeys – history of commercial production

Turkey *Meleagris gallopava* is from the Latin gallus, meaning cock, and pavo, meaning chickenlike. Meleagris is the Roman name for guineafowl, suggestive of the early confusion of the turkey with guineafowl.

It is by no means clear how the turkey gained its name - one colourful theory claims a certain resemblance between the turkey stag's head and the helmet of a soldier of the Turkish Empire.

Another suggestion is from the wild turkey's call that sounds like turk-turk-turk. Another likely explanation is that in the 16th century, merchants trading along the seaboards of the Mediterranean were known as Turkes. They probably included the birds in their merchandise and they became known as turkey fowls.

The American Indians hunted wild turkey for its sweet, juicy meat as early as 1000AD. Turkey feathers were used to stabilise arrows and adorn ceremonial dress, and the spurs on the legs of wild stag turkeys were used as projectiles on arrowheads.

Turkeys are believed to have first been brought to Britain in 1526 by Yorkshireman William Strickland - he acquired six birds from American Indian traders on his travels and sold them for tuppence each in Bristol.

Until the 1950s turkey production continued along traditional lines. Today's turkey industry came into being as a result of several technical developments in the late 1950s and early 1960s. The first of these was the introduction of the verandah system for turkey growing which enabled producers to control blackhead disease for the first time. However, the system was expensive and the development of effective drugs for the control of the disease allowed turkeys to be kept in pole barns and controlled-environment houses. The introduction of broad-breasted strains of turkeys from the USA led to improved British strains of turkeys with better growth rates, feed conversion and conformation.

Most of the turkeys raised commercially are from the White Holland breed, and have white feathers.

Geese – history of commercial production

Through the centuries the domestic goose *Anser Anser F. Domesticus, Anser Cygnoides F. Domesticus* held pride of place on British tables at times of festivity and celebration. Apart from the flavour and texture of its meat, the goose has been a source of other valued benefits.

Goose quills were used for writing until the late 19th century. Feathers and down were much prized for bedding.

In the field of warfare the goose has made a remarkable contribution to British culture. Our only indigenous goose is the greylag and it was from this bird that the archers would select the grey pinion feathers with which to make the flights, or fletches, for their arrows.

Before the seizure of most common land under the various Enclosure Acts, small communities would invest in flocks of geese and graze them on open spaces within each parish. The benefits were obvious— eggs, feathers, down, quills, medicinal uses for its fat — but chiefly they were valued for their meat. Many English customs and traditions, especially at Michaelmas (September 29), were celebrated by feasting on goose whose meat was always regarded as superior to other poultry.